

Work Order ID 138696

138696

TULMAR

Page 1

Monday, November 09, 2015 11:08:58 AM

Item ID: PB67-43001-33

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Upper Pad Assembly

Start Date: 11/9/2015 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/27/2015 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: MUF Date: 5-11-9 Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
B67-43001-33	Rev C

100

0.00

100

FLOW WATER JET

0.00

Waterjet

Memo

FLOW CNC Waterjet

 1-Cut as per Dwg B67-43001-325***Use cutting file -325***** Dwg
 Rev: C Prog Rev: C 2-Deburr if necessary

(4)

11/15/26

110

0.00

110

QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

Quality Control

(4)

11/15/26

120

0.00

120

QC8- Inspect parts - second check

0.00

QC

Memo

Quality Control

(4)

 WAS
 38
 9-80

NOV 27 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																												
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																												
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																												
Large Fab ☐	Composite ☐	Supplier ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																								
Description Work Order Deviation				Disposition				Completed By																																																							
								Lead hand / Supervisor Approval Verification																																																							
								QC / QA Coordinator Approval																																																							
Root Cause				FAULT CATEGORY																																																											
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
																							OTHER :																																								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																					
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																										
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																										
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																										
Large Fab ☐	Composite ☐	Supplier ☐																																																											
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____																																																						
Description Work Order Deviation				Disposition																																																									
Root Cause <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Environment ☐</td> <td style="width: 50%;">No Re-verification ☐</td> </tr> <tr> <td>Design ☐</td> <td>Operator ☐</td> </tr> <tr> <td>Doc/Data ☐</td> <td>Offset/Setup ☐</td> </tr> <tr> <td>Equip/Tooling ☐</td> <td>Supplier ☐</td> </tr> <tr> <td>Handling/Pre ☐</td> <td>Training ☐</td> </tr> <tr> <td>Material ☐</td> <td>Use for Testing ☐</td> </tr> <tr> <td>Internal Transport ☐</td> <td>Poor Information ☐</td> </tr> <tr> <td>Tribal Knowledge ☐</td> <td>Rushing ☐</td> </tr> <tr> <td>LOA ☐</td> <td>Product Improvement ☐</td> </tr> <tr> <td>Substation ☐</td> <td>Process Improvement ☐</td> </tr> <tr> <td>Past Expiry Date ☐</td> <td>Manufacturing Process ☐</td> </tr> <tr> <td>Misidentified ☐</td> <td>Past Due ☐</td> </tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Pressure/Forced ☐</td> <td style="width: 33%;">Temperature/Cure ☐</td> <td style="width: 33%;">Power Loss/Surge ☐</td> </tr> <tr> <td>Bending ☐</td> <td>Set-up ☐</td> <td>Folio/Program ☐</td> </tr> <tr> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> <td>Grain ☐</td> </tr> <tr> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> </tr> <tr> <td>Cuffs ☐</td> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> </tr> <tr> <td>Crushing ☐</td> <td>Countersink ☐</td> <td>Off-set ☐</td> </tr> <tr> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> </tr> <tr> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> </tr> <tr> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> </tr> </table>						Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Crushing ☐	Countersink ☐	Off-set ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐
Environment ☐	No Re-verification ☐																																																												
Design ☐	Operator ☐																																																												
Doc/Data ☐	Offset/Setup ☐																																																												
Equip/Tooling ☐	Supplier ☐																																																												
Handling/Pre ☐	Training ☐																																																												
Material ☐	Use for Testing ☐																																																												
Internal Transport ☐	Poor Information ☐																																																												
Tribal Knowledge ☐	Rushing ☐																																																												
LOA ☐	Product Improvement ☐																																																												
Substation ☐	Process Improvement ☐																																																												
Past Expiry Date ☐	Manufacturing Process ☐																																																												
Misidentified ☐	Past Due ☐																																																												
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐																																																											
Bending ☐	Set-up ☐	Folio/Program ☐																																																											
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐																																																											
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐																																																											
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐																																																											
Cuffs ☐	Contamination ☐	Out of Sequence ☐																																																											
Crushing ☐	Countersink ☐	Off-set ☐																																																											
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐																																																											
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐																																																											
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐																																																											
OTHER : _____																																																													

Work Order ID 138696

Monday, November 09, 2015 11:08:58 AM

138696

Page 4

Item ID: PB67-43001-33

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Upper Pad Assembly

Start Date: 11/9/2015 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/27/2015 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00

190

QC

Memo

0.00

Quality Control

DAS
9
9-89

① 15-12-18

200

PURCHASING

0.00

200

Purchasing

Memo

0.00

Purchasing

SEND TO TALMAR FOR FOAM AND FABRIC

P/O: 31110

DAS
13
9-89

JAN 22 2016

4

210

0.00

210

Packaging

Memo

0.00

Packaging

FEB 24 2016

4

DAS
6
8-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

Picklist Print

Monday, November 09, 2015 11:08:57 AM

Page 1

Work Order ID: 138696

138696

Parent Item: PB67-43001-33

PB67-43001-33

Parent Item Name: Upper Pad Assembly

Start Date: 11/9/2015

Required Date: 11/27/2015

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A 08-06-20 new issue DD verified by:ec
10.09.28 per rev C dwg EC verified by:DD

IPP Rev C

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M2024T3S.032		Purchased	No			180	sf	171.5000	0.3064	1.290105			
--------------	--	-----------	----	--	--	-----	----	----------	--------	----------	--	--	--

M2024T3S 032

2024-T3 .032 sheet

DEC 15/11/26

Location	Loc Qty	Loc Code
MAT022	171.5	
M130497	8.5	
M132875	67	
M133452	96	

1.5

MS20426AD3-4		Purchased	No			180	Each	3,717.000	10	40			
--------------	--	-----------	----	--	--	-----	------	-----------	----	----	--	--	--

MS20426AD3-4

RIVET

FF

DEC 17 2015

Location	Loc Qty	Loc Code
GA	3149	
m131697	3149	
ST312	568	
125578	7	
m125578	181	
m127432	380	

40

MS21075L3		Purchased	No			100	Each	78.0000	5	20			
-----------	--	-----------	----	--	--	-----	------	---------	---	----	--	--	--

MS21075L3

Nut Plate

FF

DEC 17 2015

Location	Loc Qty	Loc Code
ST298	78	
M131153	78	

20

DQA: _____ Date: _____



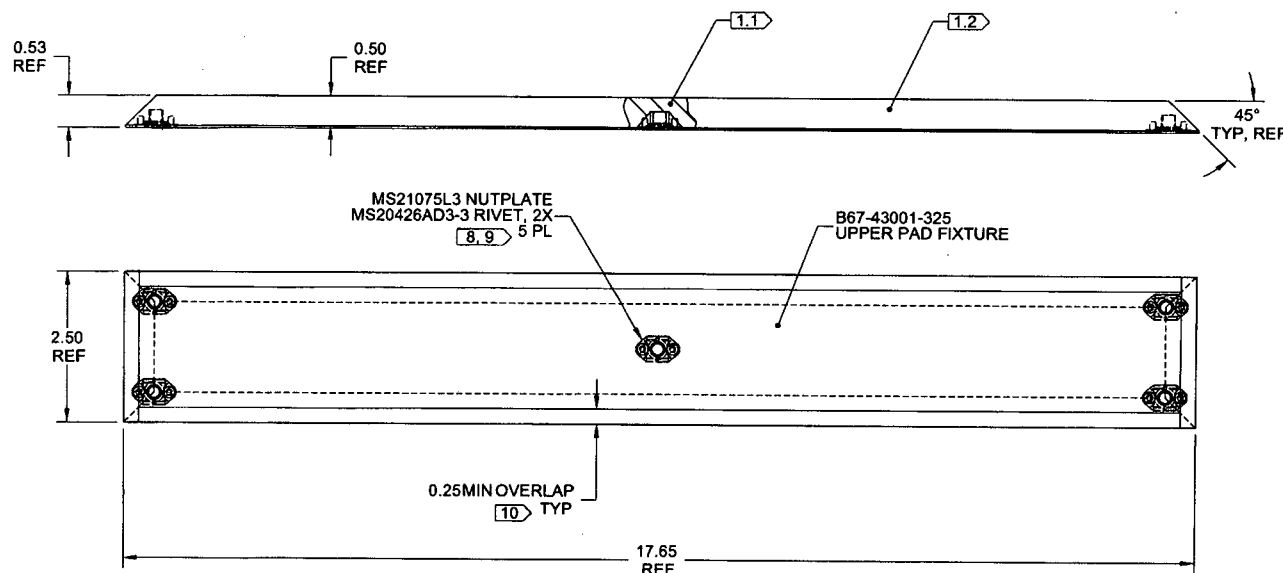
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

ITEM	QTY -33	P/N	DESCRIPTION
1	x	B67-43001-33	UPPER PAD ASSEMBLY
2	1	B67-43001-325	UPPER PAD FIXTURE
3	5	MS21075L3	NUT PLATE
4	10	MS20426AD3-3	RIVET
5	A/R	1637-001	SEE NOTE 1.1
6	A/R	1495	SEE NOTE 1.2
7	A/R	LA4009	SEE NOTE 1.3



B67-43001-33 UPPER PAD ASSEMBLY

NOTES:

- 1) MATERIAL:
 - 1.1) FOAM: ETHYLENE PROPYLENE NEOPRENE SBR CLOSED-CELL, FLAME RETARDANT, 0.50 THICK, PER ASTM D1056 2A2, SERVICE TEMP -40°F TO +200°F, COLOUR: BLACK
REF. TULMAR P/N 1637-001
 - 1.2) FABRIC: 100% 420 DENIER NYLON, MIN THREAD COUNT 35X35, POLYURETHANE COATED ONE SIDE, COLOUR: BLACK
REF. TULMAR P/N 1495
 - 1.3) ADHESIVE: URETHANE WITH CATALYST, TWO PART, CLIFTON LA4009
- 2) FINISH: BOND NEOPRENE TO COVER PLATE USING ADHESIVE. COVER WITH DENIER AS SHOWN.
- 3) TOLERANCES: PER TABLE 1 (ZN A3-1) UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.22 lbs REF
- 8) NUTPLATES AND HOLES MUST BE FREE OF ADHESIVE AND FABRIC
- 9) IT IS ACCEPTABLE TO RELIEVE FOAM WHERE THE NUTPLATES ARE LOCATED TO ENSURE ADEQUATE BONDING OF FOAM TO PLATE
- 10) DENIER NYLON TO BE BONDED ALL AROUND INNER SIDE OF PLATE

TABLE 1 (3)

TOLERANCES ON FABRIC (PARTS AND ASSEMBLIES)
±1/8: DIMS <2
±1/4: DIMS 2 TO <10
±1/2: DIMS 10 TO <20
±5/8: DIMS 20 TO <40
±1.5%: DIMS EQUAL TO OR > 40

C	REDRAWN PREMIER AVIATION DRAWING IAW DART QSI 018, QSI 043 AND TULMAR SAFETY SYSTEMS INC.'S MANUFACTURING PROCESS AND TOLERANCES ON FABRIC. FOR PREVIOUS REVISIONS, REFER TO SHEET 41 OF PREMIER AVIATION DRAWING No. B67-43001. REASON: SEE PAR#09-011.	MB	10.04.27
REV.	DESCRIPTION	BY	DATE
DESIGN	R/W	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		B67-43001-33	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.	N/A	UPPER PAD ASSEMBLY	NTS
DATE	10.04.27	COPYRIGHT © 1995 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
2010-09-16
MD

DQA: _____ Date: _____

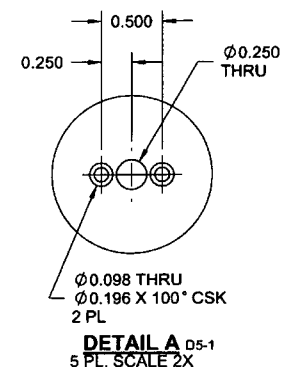
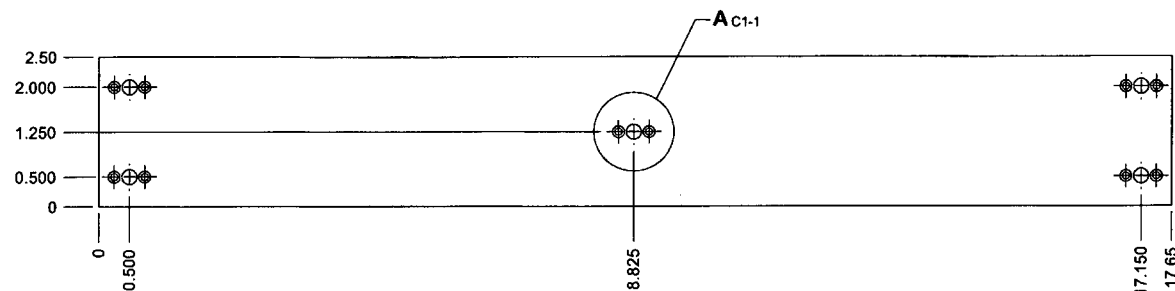


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order update only

Work Order: _____ Part No. _____ NCR No. _____			DISPOSITION Rework Scrap Use-as-is Suspected Unapproved		AGAINST DEPARTMENT/PROCESS Skid-tube Machining Thermoforming Large Fab Cross tube Small Fab Finishing Composite Water Jet Prod. Eng. Coord. Rec/Store/Packaging Supplier Engineering Quality Other						
Date :		Step #:			QTY Effective :			MRB (QSI042) Approval			
Description Work Order Deviation					Disposition						
										Completed By	
										Lead hand / Supervisor Approval Verification	
										QC / QA Coordinator Approval	
Root Cause Environment Design Doc/Data Equip/Tooling Handling/Pre Material Internal Transport Tribal Knowledge LOA Substation Past Expiry Date Misidentified No Re-verification Operator Offset/Setup Supplier Training Use for Testing Poor Information Rushing Product Improvement Process Improvement Manufacturing Process Past Due					FAULT CATEGORY Pressure/Forced Bending Centre Not Concentric Cracks Crimp/Kink/Ripple/Wave Cuffs Crushing Heat Treat Wave/Twist in Tube Marks/Chatter Temperature/Cure Set-up BOM/Route Broken/Damage/Defect Inspection Incomplete/Unqualified Contamination Countersink Cut Too Short Instructions Incomplete/Unclear Drill Holes Power Loss/Surge Folio/Program Grain Weld Wrong Stock Pulled Out of Sequence Off-set Mislabeled Fit/Function Misaligned/off center Positioned Wrong Outside Dimensions Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved Drawing Finish Misread Turning Sequence						
					OTHER :						



B67-43001-325 UPPER PAD FIXTURE

RELEASED
2010-09-16

20151125
SA 138696

NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.032 THICK
PER AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209
REF. DART SPEC. M2024T3S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GREEN SANDEX (4.3.5.8) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.14 lbs

C	REDRAWN PREMIER AVIATION DRAWING IAW DART QSI 018 AND QSI 043. FOR PREVIOUS REVISIONS, REFER TO SHEET 41 OF PREMIER AVIATION DRAWING No. B67-43001. REASON: SEE PART 09-011.	MB	10.04.27
REV.	DESCRIPTION	BY	DATE
DESIGN	RW		
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.	N/A		
DATE	10.04.27		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.
B67-43001-325

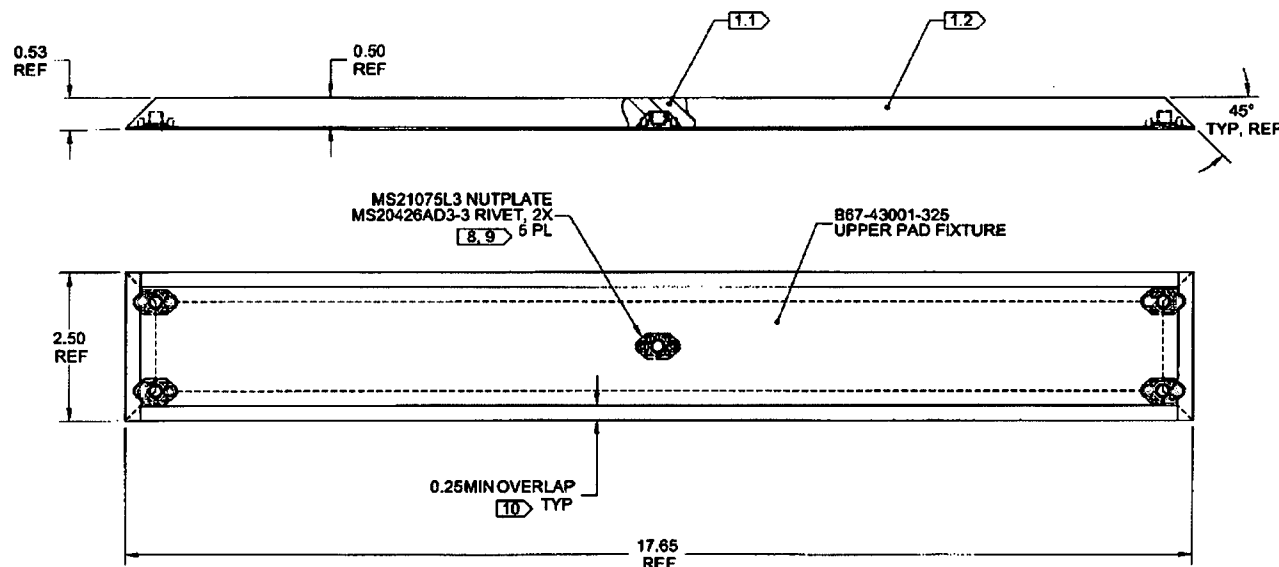
REV. C
SHEET 1 OF 1

TITLE
UPPER PAD FIXTURE

SCALE
NTS

COPYRIGHT © 1986 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

ITEM	QTY	P/N	DESCRIPTION
1	x	B67-43001-33	UPPER PAD ASSEMBLY
2	1	B67-43001-325	UPPER PAD FIXTURE
3	5	MS21075L3	NUT PLATE
4	10	MS20426AD3-3	RIVET
5	A/R	1637-001	SEE NOTE 1.1
6	A/R	1495	SEE NOTE 1.2
7	A/R	LA4009	SEE NOTE 1.3



B67-43001-33 UPPER PAD ASSEMBLY

- NOTES:**
- FOAM, SBR/EPDM/CR BLEND, BLACK, ASTM D1056 2A2, 1/2" THK., BRITTLENESS TEMP OF -40°F, IAW ASTM D 746, FMVSS 302.
- 1) MATERIAL:
- 1.1) FOAM: ETHYLENE-PROPYLENE-NEOPRENE SBR CLOSED CELL, FLAME RETARDANT, 0.50 THICK, PER ASTM D1056 2A2, SERVICE TEMP -40°F TO +200°F, COLOUR: BLACK, REF. TULMAR P/N 1637-001
- 1.2) FABRIC: 100% 420 DENIER NYLON, MIN THREAD COUNT 35X35, POLYURETHANE COATED ONE SIDE, COLOUR: BLACK, REF. TULMAR P/N 1495
- 1.3) ADHESIVE: URETHANE WITH CATALYST, TWO PART, CLIFTON LA4009 OR LA4009NOVOC.
- 2) FINISH: BOND NEOPRENE TO COVER PLATE USING ADHESIVE. COVER WITH DENIER AS SHOWN.
- 3) TOLERANCES: PER TABLE 1 (ZN A3-1) UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.22 lbs REF
- 8) NUTPLATES AND HOLES MUST BE FREE OF ADHESIVE AND FABRIC
- 9) IT IS ACCEPTABLE TO RELIEVE FOAM WHERE THE NUTPLATES ARE LOCATED TO ENSURE ADEQUATE BONDING OF FOAM TO PLATE
- 10) DENIER NYLON TO BE BONDED ALL AROUND INNER SIDE OF PLATE

DAS
22
9-89 16.01.27

DAS
22
9-89

TULMAR MARK-UP
REV I
03/03/2014 RL

DAS
22
9-89

RELEASED
2010-09-16

C	REDRAWN PREMIER AVIATION DRAWING IAW DART QSI 018, QSI 043 AND TULMAR SAFETY SYSTEMS INC.'S MANUFACTURING PROCESS AND TOLERANCES ON FABRIC. FOR PREVIOUS REVISIONS, REFER TO SHEET 41 OF PREMIER AVIATION DRAWING No. B67-43001. REASON: SEE PAR009-011.	MB	10.04.27
REV.	DESCRIPTION	BY	DATE
DESIGN	RW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN		DRAWING NO.	REV. C
CHECKED		B67-43001-33	SHEET 1 OF 1
MFG. APPR.		TITLE	SCALE
APPROVED		UPPER PAD ASSEMBLY	NTS
DE APPR.	N/A	DATE 10.04.27	
COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR FOR ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.			

TABLE 1 (3)	
TOLERANCES ON FABRIC (PARTS AND ASSEMBLIES)	
±1/8"	DIMS <2
±1/4"	DIMS 2 TO <10
±1/2"	DIMS 10 TO <20
±5/8"	DIMS 20 TO <40
±1.5%	DIMS EQUAL TO OR > 40

PACKING SLIP

TULMAR

Tulmar Safety Systems Inc.
1123 Cameron Street
Hawkesbury, ON K6A 2B8
Tel: 613-632-1282
Fax: 613-632-2030
GST R132478223
MID : XOTULSAF1123HAW
email: info@tulmar.com

Packing Slip No Page

56789 2

Ship Date

2/23/2016

Bill To:

Dart Aerospace

1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Canada

Ship To:

Dart Aerospace

1270 Aberdeen Street
Tel: 613-632-9577
Hawkesbury, ON K6A 1K7
Canada

Order number	Sales order date	Account number	Loc	Account manager
33591	1/27/2016	CDART100	H	Francine Bigras
PO number	Ship via	Shipping Terms		
PO31110	Pick-Up	FOB HAWKESBURY		
Item No. Description	Quantity ordered	UOM	Qty Shipped/Returned	Quantity on back order

8421-106 Plate, Cover 90°, Ass'y Drawing No: B67-43001-69+MU DWG Rev: D+1	15.00	EA	15.00
--	-------	----	-------

Lot no.: BATCH0000000010 15.00

8421-107 Dart Blade Fold Kit - Pad #8 Drawing No: B67-43001-33+MU DWG Rev: C+1 Item 3	4.00	EA	4.00
---	------	----	------

Lot no.: BATCH0000000008 4.00

16/2/24
SK

Certificate of Conformance

☒ See Certification Enclosed

I hereby certify that the items listed hereon have been inspected, and / or tested (as applicable), conform to all specifications and requirements detailed in the contract or purchase order. Objective evidence to support this statement is on file, and can be made available upon request.
If any questions or concerns, please contact QA Manager @ 613-632-1282 ext. 245.

Authorized Inspector

Lenore LaLiberte

Date:

FEB 23 2016



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31110**

Purchase Order Date 1/22/2016

PO Print Date 1/28/2016

Page Number 2 of 4

Order From :
TULMAR SAFETY SYSTEMS
1123 CAMERON ST
HAWKESBURY, ON K6A 2B8
CA

VC-TUL001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613 632 1282

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

CAD

FOB

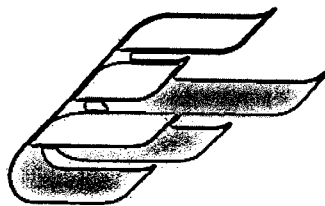
FCA - (Free Carrier)

3	138696	PB67-43001-33 UPPER PAD ASSEMBLY	2/19/2016 Yes 2/19/2016	4.00	16/2/24/34	\$82.50	\$330.00
FOAM AND FABRIC TULMAR P/N: 8421-107 INCLUDED MARK UPS AT REV.C +MU1							
Line Total:							\$330.00
4	138688	PB67-43001-85 D-PAD	2/19/2016 Yes 2/19/2016	11.00		\$55.00	\$605.00
FOAM AND FABRIC TULMAR P/N: 8421-102 INCLUDED MARK UPS AT REV.D + MU MISSING ON DART DWG. "TRANSFER DIAM 0.19 HOLE FROM WELDMENT TO FABRIC 2PL"							
Line Total:							\$605.00
5	138691	PB67-43001-69 90 DEG. COVER PLATE	2/19/2016 Yes 2/19/2016	15.00		\$160.00	\$2,400.00
FOAM AND FABRIC AS PER DWG PD67-43001-69 REV. D TULMAR P/N: 8421-106							

PO Instructions: SALES QUOTE NO. 16014,16058

Note:

1/28/2016



J. ENNIS FABRICS

June 10, 2015

Fax To: Tulmar Safety Systems
Fax: 613-632-2030
Attention: Sandra Nadeau

Certificate of Conformance

Re: PO 28594-00 for Oxford 7 black

The goods shipped on P/O 28594-00 are as per sampled goods. Specification as follows:
As per mill documentation:

Oxford 7 black is in compliance with the following standards:

Width: Product is 58 Inches Wide.

Roll Size: Average Roll Length is 75 Yards.

Weight: Product Weight is 6.79 Ounces per Sq.Yd. /Product Weight is 10.94 oz per Lin.Yd

Content: 100% Nylon

Coating: Product has a Polyurethane Coating {approximately 0.65 oz/ Sq.Yd. (18.5g/sq.yd.)}

Denier: Yarn is 420 Denier.

Thread Count: Construction is 62 x 38 Threads per Square Inch

Protective Finish; Product is Water Repellent.

Hydro Resist: AATCC 127 (Suter): Average 800 mm

Piece # 111926200 Manufacture Date: 03/25/15, Lot Number: 444815

Sincerely;
J. Ennis Fabrics Ltd.

S. Nolan

Susan Nolan
Customer Service Specialist

C/c's used to make B67-43001-83 Rev.D

+ B67-43001-85 Rev.D+1

*R. Liberté (QC)
Feb. 23/16*

JUN 19 2015

1495 B # 33



E.F. Walter Inc.	CERTIFICAT DE CONFORMITÉ CERTIFICATE OF COMPLIANCE		Approved JR Date 1/3/02
Revision # 0	Revision date: January 30, 2002	Doc # F.7.5.5.A	Page 1 of 1

Date : 04/14/2009

VENDU À
SOLD TO

6048

TULMAR SAFETY SYSTEMS INC.

1123 CAMERON STREET

HAWKESBURY

ONT

K6A 2B8

FOURNISSEUR
VENDORE.F. WALTER INC.
180 BARTOR ROAD
TORONTO, ONTARIO
M9M 2W6

Commande / Order # 15534-00

Notre / Our Reference # 59448

Nous certifions par la présente que la totalité du matériel inscrit ci-dessous a été inspecté et vérifié et est conforme aux devis et aux normes mentionnés sur votre commande.

We hereby certify that all of the material listed below has been inspected and tested and conforms to the drawings and / or specifications stated on your purchase order.

Item	Quantité Quantity	Pièce # Part #	Description
742012007	15 sheets	1637-002	SC 42 BLACK -TRIMMED - NO SKIN 1/8" TH X 42" X 72"
			LOT# 84277 MFG DATE: 03/22/09

Signé
Signed

TSS #1637-602/02

TULMAR

Certificate of Conformance

Tulmar P/N 2530	Description Thread, Nylon, Black, A-A-50626, TTY, CLA Size F, Quality Closure - G-0, Country of Origin USA, NS C0030		Dwg #	Revision	Qty 40 Spl
Tulmar PO # 27000-00	Line Item # 1	Supplier Name / Address CANSEW INC, 111Chabanel West, Suite 101, Montreal, Que., H2N 1C9		Supplier Packing Slip # H66082	

Supplier Declarations:

Hazardous Materials Acknowledgement		The items described below may contain, and their processing may have included, the following substances:		Hexavalent Chromium; Cadmium; Beryllium; Nickel; Mercury; Lead; Asbestos; Radioactive elements YES ☐ NO ☒	
Country of Origin of Goods : USA			if YES, please complete the HazMat Acknowledgement form @ www.tulmar.com		
Limited Shelf-Life		<u>Definition:</u> If material is consumed or transformed into final product before end of shelf-life there is no effect on final product.	These items have a limited Shelf-Life	YES ☐ NO ☒	if YES, please complete the Time Expired – Shelf-Life questionnaire @ www.tulmar.com
Expiry date		<u>Definition:</u> Date after which performance will no longer be as intended - expiration is transferred to the final product.	These items have an expiry date	YES ☐ NO ☒	

Additional Information (MRS#, MRA#, limitations, etc...):

[illegible]

I hereby certify that the goods listed hereon have been inspected and/or tested, as applicable, and conform to all specifications and requirements detailed in the contract or purchase order and relevant quality clauses. Objective evidence to support this statement is on file and can be made available upon request. Should further information be required, please contact:

Signature HL	Name Hershie Schachter	Date (DD-MMM-YYYY) 28-Jan-2014
Title President	Email hershie@cansew.ca	Phone # (514) 382-2807

Form Revision 13 Aug 2012

2530/53 (8W)



48 Burgess Place
Wayne, NJ 07470

Certificate Of Analysis

11/11/2015

Sales Order Number: 5927

Customer Order Number: 29283

Manufactured for
TULMAR SAFETY SYSTEMS

14172-C6:9A LA4009NOVOC, P/N 7122-001 14172-C6:9A LA4009NOVOC UNLINED GALLON CAN

Lot# PNJ-1015-0252

Qty: 52 EA

Manufacture Date: 11/4/15

Expiration Date: 11/4/16

Test(s)	Results	Min	Max	
% Solids @275F for 30 minutes	14.3000	13.00	15.00	Percent
Brookfield, RVT, #3 Spindle, 20RPM, 78F	1,150.0000	800.00	1,500.00	Centipoise
Visual check for dry film color	pass	(CLEAR TO HAZY YELLOW) PASS/FAIL		

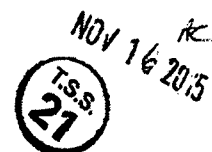
"The material supplied conforms to all applicable engineering drawing, specifications and PO requirements."

Dan Constantino

Daniel Constantino

Quality Assurance Mgr/ISO Coordinator

Country of Origin: USA



7122-001 B#5

SH_BOL_90